

NMCP COVID-19 Report: Tuesday, 14 April 2020

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Disclaimer: I am not a medical professional. This document is current as of the date noted above. While I make every effort to find and summarize available data, things are changing rapidly, with new research and literature published daily. Best practice and evidence are constantly shifting during this international public health crisis.

Statistics (as of Tuesday, 14 April 2020 at 1200)

<i>Global total confirmed cases: 1,945,055 in 185 countries/regions</i>	
<i>United States</i> Estimated peak resource use: 10 April 2020 (projection from UW IHME) JHU CSSE Confirmed Cases: 584,073 NY: 196,146 NJ: 64,584 MA: 26,867 Total deaths: 23,709 NY: 10,058 NJ: 2,443 MA: 844 Total hospitalized: 42,712 Total recovered: 43,482 Dept VA Positive Veteran Cases: 4,097 (as of 13 Apr)	<i>Virginia</i> Estimated peak resource use: 27 April 2020 (projection from UW IHME) VHHA Ventilators: 2,838 on hand; 709 in use Bed availability: 5,991 VA DOH Total cases / hospitalizations: 6,171 / 978 Chesapeake: 136 / 34 Hampton: 73 / 19 Newport News: 93 / na Norfolk: 97 / 24 Portsmouth: 59 / 21 Suffolk: 57 / na Virginia Beach: 252 / 51 Total deaths: 154 Dept VA Hampton VAMC: 15 inpatient, 21 outpatient (as of 13 Apr)

Looking Ahead

Planned evidence summary on telehealth in substance use treatment, special topic on ethics in pandemics, and any other submitted requests.

Evidence Summary: Palliative Care

Request: "One topic of interest for the command suite currently is palliative care for COVID-19 patients. Specifically, the need to identify training or support for providers."

Pandemic Palliative Care

A 2010 article looked at palliative care planning in a hypothetical influenza pandemic, noting the special needs for guidance and ethical justification during surge demand ([J Pain Symptom Manage](#) [2010]).

The need for palliative care was raised early in the current pandemic; an opinion piece from the founder of Palliative Care in Humanitarian Aid Situations and Emergencies (PalCHASE) called on learning from past outbreaks and the need to support and adapt to infectious disease situations ([eHospice](#)). One valuable textbook on this topic is *A Field Manual for Palliative Care in Humanitarian Crises*; chapters include delirium and acute anxiety, care of the dying patient, communicating bad news, and a focus on trauma-informed response for providers ([Oxford](#)).

Palliative Care Specific to COVID-19

The University of Washington recently published an article outlining their development of a palliative care plan for inpatients with COVID-19 ([J Pain Symptom Manage](#) [Fausto]). In a letter to the editor, Powell and Silveira note the special challenges in providing palliative care with COVID-19 that may require different approaches compared to "normal" palliative care ([J Pain Symptom Manage](#) [Powell]).

Many groups outside of the US offer palliative care guidance for the COVID-19 pandemic. The UK-based Royal College of General Practitioners has resources on ethical concerns and guidance related to COVID-19 in a primary care setting that touches on treatment decisions and anticipatory care planning ([RCGP](#)). Germany's Association for Palliative Medicine has published an English-language version of their recommendations for treating COVID-19 patients from a palliative care perspective ([DGP](#)). The International Association for Hospice and Palliative Care has a list of resources from a variety of academic, professional organizations, and other agencies for the pandemic ([IAHPC](#)).

COVID-19 Training Opportunities

Numerous palliative care organizations and professional groups have made COVID-19 specific palliative care training free for a limited time; many are designed for any clinician caring for patients during the COVID-19 pandemic.

A selection of resources in addition to those cited above that speak to training healthcare workers for COVID-19 palliative care:

- Mount Sinai's Center to Advance Palliative Care has learning pathways, modules, and a toolkit ([CAPC](#)).
- The Shiley Institute for Palliative Care has free courses until 30 June 2020; their site also includes other resources and ebooks ([Shiley](#)).
- Pallium Canada, in collaboration with Canadian Medical Association (CMA), has free webinars (recorded and ongoing) and online modules ([Pallium Canada](#)).
- UK-based PalCHASE has an extensive list of resources and publications "at the intersection of Coronavirus and palliative and end of life care" ([PalCHASE](#)).
- Sudden, a UK-based charity for those touched by sudden death, offers advice on COVID-19 related bereavement ([Sudden](#)).

General Palliative Care Training

The WHO has published guidance on integration of symptom relief and palliative care into primary ([WHO](#)) and pediatric care ([WHO](#)). One 2017 article focused on general palliative care training for Canadian physicians ([J Palliat Med](#)), but many of the resources mentioned may be of interest to others.

Evidence Summary: Patient Transport

Request: "Would you please do a literature search for anything related to safely transporting COVID-19 patients, by any vehicle. Anything on air evacuation? What personal protective equipment was used? Any concerns about airborne transmission to the air crew? If nothing about transporting COVID-19 patients, maybe something on Ebola, Avian influenza?"

Airborne Transmission of SARS-CoV-2

At the time of this writing, there are no documented, peer-review published cases of airborne transmission of SARS-CoV-2, the virus that causes COVID-19 disease, based on in vitro or in vivo data. A preprint article suggests that room ventilation, open space, and proper use and disinfection of toilet can limit aerosol transmission; the authors also state: "virus aerosol deposition on protective apparel or floor surface and their subsequent resuspension is a potential transmission pathway" ([bioRxiv*](#)).

An analysis of 75,465 COVID-19 cases in China from WHO states: "Airborne spread has not been reported for COVID-19 and it is not believed to be a major driver of transmission based on available evidence" ([WHO](#)). The CDC states: "The contribution of small respirable particles, sometimes called aerosols or droplet nuclei, to close proximity transmission is currently uncertain. However, airborne transmission from person-to-person over long distances is unlikely." ([CDC](#)) It is unclear what exactly is meant by "long distances". It is also unclear how the closed environment with pressurized, recirculated air of an air transport might be a factor in airborne transmission.

Transport with Highly Infectious Patients

A review article published last year details the available literature on air medical evacuation for high-level containment transport of patients with highly infectious diseases ([Air Med J](#)). There is little data specific to safe transport (by air or other means) of COVID-19 patients. A letter to the editor provides some COVID-19 specific guidance on transport (intra-hospital and inter-hospital) of patients, but does not speak to air, only ground transport ([Crit Care](#)).

Older literature based from SARS, MERS, and Ebola outbreaks provides the bulk of what evidence and guidance there is on transport (ground and/or air) of patients with highly infectious diseases. For examples of that literature that may be of interest, see this collection of citations in PubMed:

<https://www.ncbi.nlm.nih.gov/sites/myncbi/tracy.shields.1/collections/59514571/public/>

Recent Literature

[JAMA](#): Pharmacologic Treatments for Coronavirus Disease 2019 (COVID-19): A Review (13 April 2020)

"No proven effective therapies for this virus currently exist. The rapidly expanding knowledge regarding SARS-CoV-2 virology provides a significant number of potential drug targets. The most promising therapy is remdesivir. Remdesivir has potent in vitro activity against SARS-CoV-2, but it is not US Food and Drug Administration approved and currently is being tested in ongoing randomized trials. Oseltamivir has not been shown to have efficacy, and corticosteroids are currently not recommended. Current clinical evidence does not support stopping angiotensin-converting enzyme inhibitors or angiotensin receptor blockers in patients with COVID-19."

[Ann Intern Med](#): Diagnostic Testing for Severe Acute Respiratory Syndrome–Related Coronavirus-2: A Narrative Review (13 April 2020)

"Key Summary Points: The COVID-19 pandemic demonstrates the essential role of diagnostics in the control of communicable diseases.

Laboratory-based molecular assays for detecting SARS–CoV-2 in respiratory specimens are the current reference standard for COVID-19 diagnosis, but point-of-care technologies and serologic immunoassays are rapidly emerging.

Early, massive deployment of SARS–CoV-2 diagnostics for case finding helped curb the epidemic in several countries.

Urgent clinical and public health needs now drive an unprecedented global effort to increase testing capacity."

[NEJM](#): Universal Screening for SARS-CoV-2 in Women Admitted for Delivery (13 April 2020)

New York City-based data of 215 pregnant women who delivered infants between 22 March and 04 April at 2 facilities. Women were screened for symptoms of COVID-19 on admission; 4 (1.9%) had fever or other symptoms and tested positive for SARS-CoV-2. Of the 211 asymptomatic women, all were afebrile, and nasopharyngeal swabs were done in 210 – 29 (13.7%) were positive for SARS-CoV-2.

[Circulation](#): Considerations for Drug Interactions on QTc in Exploratory COVID-19 (Coronavirus Disease 2019) Treatment (08 April 2020)

The authors point out that both hydroxychloroquine and azithromycin are known (albeit rarely) to cause QT prolongation and arrhythmias, and torsade de pointes; COVID-19 patients may be at increased risk of sudden cardiac death when treated with these drugs. "The effect of the combination of these agents on QT or arrhythmia risk has not been studied. There are very limited data evaluating the safety of combination therapy."

See also In Brief below for related concerns with this drug therapy.

[JAMA](#): Seriously Ill Patients' Willingness to Trade Survival Time to Avoid High Treatment Intensity at the End of Life (06 April 2020)

This was a prospective cohort study of patients >60 years old hospitalized with serious oncologic, cardiac, and pulmonary illnesses. "Of 180 patients presented with the survival time trade-off question, 156 patients (86.7%) said they would trade a full year of time alive to avoid the scenario in which they were in the ICU for 3 weeks at the end of life and died on life support."

[Immunity](#): SARS-CoV-2 Vaccines: Status Report (06 April 2020)

This article is a good review covering potential therapeutic and prophylactic interventions for COVID-19 with an emphasis on vaccines – what is known about SARS-CoV-2, vaccine design and in development, and timeframes for treatments.

[Ann Intern Med](#): COVID-19: Peer Support and Crisis Communication Strategies to Promote Institutional Resilience (06 April 2020)

"We recommend 3 strategic principles that may be of value for other health care institutions responding to the COVID-19 pandemic: First, provide leadership focused on resilience... Second, structure crisis communications to provide information and empowerment.... Third, create a continuum of staff support within the organization."

In Brief

Research & Publications

The paper on using the antimalarial drug hydroxychloroquine as a potential treatment for COVID-19 has received a statement of concern from the society that produces the journal in which the article was published ([Retraction Watch](#)). The notice states "the article does not meet the Society's expected standard, especially relating to the lack of better explanations of the inclusion criteria and the triage of patients to ensure patient safety" ([ISAC](#)). As of this writing, the online article – freely available from [IJAA](#) and noted to be in press and a pre-proof paper – does not mention or link to the statement of concern, nor is there a link to statement from the PubMed record ([PubMed](#)) or in subscription databases where the article is posted ([CK](#)).

COVID-19 Primer offers a quick visual of the publications and research surrounding the pandemic, including trends, emerging topics, and highly discussed papers ([Primer](#)).

Testing & Vaccines

Seventy vaccines are under development for COVID-19, with 3 currently undergoing human trials ([WHO](#)).

NIH has begun recruiting subjects for a "serosurvey" of 10,000 volunteers to find undetected cases of coronavirus infection and support projection models ([NIH](#)).

The WHO has published a scientific brief on the use of point-of-care immunodiagnostic testing (i.e., antigen testing), recommending it be limited to research settings only ([WHO](#)).

A preprint offers a plan for setting up a temporary laboratory for SARS-CoV-2 testing ([medRxiv*](#); see footnote from summary, above).

Other Outbreaks

Despite 52 days of no new cases and hopes that the outbreak (which began in April 2018) had stopped, the Democratic Republic of the Congo has reported a new case of Ebola ([STATnews](#)).

Mental Health

Researches are calling for suicide prevention to be integrated in public health plans with the pandemic ([MedPageToday](#)).

"Betrayal", "coercion", and "moral injury" are how some healthcare workers are describing their pandemic experience, with growing concerns of a mental health crisis looming ([STATnews](#)).

While there are risks of increased depression and anxiety with current pandemic conditions, some people paradoxically have mental health symptoms improve ([Daily Beast](#)).

Statistics & Data Visualizations

One of the earliest trackers for this pandemic ([nCoV2019](#)) was developed by a high-school teen from Washington state ([New Yorker](#)).

A Dutch-based tracker presents data per capita, giving a slightly different perspective on the outbreak; the interactive tool allows for other visualizations ([DataGraver](#)).

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